

ABSTRACT

The present invention provides a semiconductor optical modulator chiefly used in an optical communications system
5 and an optical information processing system.

The present invention is characterized in that an n-InP cladding layer (12), an optical waveguide core layer (13), an SI-InP cladding layer (14), and an n-InP cladding layer (15) are sequentially laminated on an SI-InP substrate (11),
10 and voltage is applied from an electrode (16) connected to the n-InP cladding layer (15) and from a ground electrode (17) connected to the n-InP cladding layer (12).

The present invention can be used especially as a semiconductor phase modulator or a semiconductor
15 Mach-Zehnder type optical modulator that operates at a low voltage and has a small waveguide loss.